WHAT IS CLAIMED IS:

1. A lithographic apparatus comprising:

a radiation source that produces EUV radiation;

an illumination system that provides a beam of said EUV radiation produced by said radiation source;

a support structure that supports a patterning structure, the patterning structure configured to impart the beam of radiation with a pattern in its cross-section;

a substrate support that supports a substrate; and

a projection system that projects the patterned beam onto a target portion of the substrate,

wherein said radiation source comprises a debris-mitigation system that mitigates debris particles which are formed during production of EUV radiation, the debris-mitigation system configured to provide additional particles for interacting with the debris particles.

2. A lithographic apparatus according to claim 1, wherein the debris-mitigation system is arranged to provide a flow of the additional particles.

3. A lithographic apparatus according to claim 2, wherein the debris-mitigation system is arranged to provide the flow into a direction which is substantially different from a downstream direction of a radiation beam.

4. A lithographic apparatus according to claim 2, wherein the debris-mitigation system is arranged to provide the flow of additional particles that substantially cross a radiation beam.

5. A lithographic apparatus according to claim 2, further comprising a collector for collecting EUV radiation that originates from the radiation source, wherein the debris-

mitigation system is further arranged to provide a flow of additional particles such that the additional particles flow substantially away from the collector.

6. A lithographic apparatus according to claim 2, wherein the debris-mitigation system is further arranged to provide a supersonic flow of additional particles.

7. A lithographic apparatus according to claim 1, wherein the additional particles comprise ionized particles.

8. A lithographic apparatus according to claim 1, wherein the debris-mitigation system comprises a plurality of electrodes that cause a discharge of particles when a suitable voltage is applied so that the additional particles are generated.

9. A lithographic apparatus according to claim 1, wherein the debris-mitigation system comprises a plasma generator that generates the additional particles.

10. A lithographic apparatus according to claim 9, wherein the plasma generator comprises Radio Frequency induction coils.

11. An extreme ultraviolet radiation source comprising:

a debris-mitigation system to mitigate debris particles that are formed during production of EUV radiation,

wherein the debris-mitigation system is arranged to provide additional particles that interact with the debris particles.

12. A method for mitigating debris particles that are formed during production of extreme ultra violet radiation, the method comprising:

providing additional particles for interacting with the debris particles.

13. A lithographic apparatus comprising:

a radiation source that produces EUV radiation;

an illumination system that provides a beam of said EUV radiation produced by said radiation source;

a support structure that supports a patterning structure, the patterning structure configured to impart the beam of radiation with a pattern in its cross-section;

a substrate support that supports a substrate;

a projection system that projects the patterned beam onto a target portion of the substrate; and

a particle generator that generates additional particles for interacting with debris particles.

14. A lithographic apparatus according to claim 13, wherein said particle generator comprises a plasma generator.

15. A lithographic apparatus according to claim 13, wherein said particle generator comprises a plurality of electrodes.

16. A lithographic apparatus according to claim 13, wherein said particle generator comprises an outlet and a pump.

17. A lithographic apparatus according to claim 16, wherein said pump comprises an ion getter pump.

18. A lithographic apparatus according to claim 16, wherein said outlet and said pump are arranged to provide a flow of the additional particles is a direction substantially different from a downstream direction of the beam of radiation.

19. A lithographic apparatus according to claim 13, wherein said particle generator forms part of said radiation source.

20. An EUV radiation source for generating EUV radiation for use in lithography, said EUV radiation source generating debris particles as a byproduct of EUV generation, said radiation source further comprising a particle generator that generates secondary particles that interact with said debris particles and reduce the adverse affect that said debris particles may have on lithography.